

ABSTRACT OF THE DISCLOSURE

A system and method for converting a high free fatty acid grease feedstock to biodiesel.

The process comprises a glycerolysis reaction to convert free fatty acids to glycerides and a base

5 catalyzed transesterification reaction to produce fatty acid methyl esters and glycerin in the absence of solvents. In preferred embodiments, both glycerin and methanol are recycled. The process can process a feedstock containing up to 100 percent free fatty acid content to produce biodiesel and glycerin with minimal waste generation.